Gefen®

DVI Video Wall Controller

EXT-DVI-VWC-242
User Manual

www.gefen.com

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INTRODUCTION

Congratulations on your purchase of the DVI Video Wall Controller. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen DVI Video Wall Controller

Create a 2x2 video wall for a digital signage application. Play back video at trade shows, control center, indoor lobby or other venues. The Gefen Video Wall Controller takes one DVI input to display on four displays at up to 1920x1200 or 1080p Full HD. Also, features include video adjustment to many displays and bezel sizes, thanks to its border control feature. A built-in on-screen display (OSD) facilitates operations. An IR remote is included.

The Gefen Video Wall Controller creates a 2x2 video wall by default setting, with a maximum resolution of 1920x1200 or 1080p Full HD supported on each output. Multiple input and output resolutions are supported. Each video quadrant is scaled and optimized.

How It Works

Connect the Video Wall Controller to a DVI source (which could be a satellite tuner, a computer/player producing output for digital signage, or just a set-top box.) Connect up to four DVI-compliant displays to the unit. The input signal will be split and scaled to a maximum resolution of 1920x1200 or 1080p Full HD on each DVI output. Use the buttons on the front panel or the included remote control to adjust settings.

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE DVI VIDEO WALL CONTROLLER

- The DVI Video Wall Controller only works with 2x2 video display arrays. Single (one-dimensional arrays), such as 1x2, 1x3, or 1x4, are not supported.
- The DVI Video Wall Controller does not support HDCP protected content.
- This product will only support the RGB colorspace (YCbCr is not supported).
- Digital DVI-D only is supported on the input and output connectors, i.e. DVI-D.
- Please see page 8 for a complete listing of the supported input and output resolutions.
- This unit generates a significant amount of heat and proper ventilation is necessary to ensure maximum product longevity.
- HDCP content is not supported.

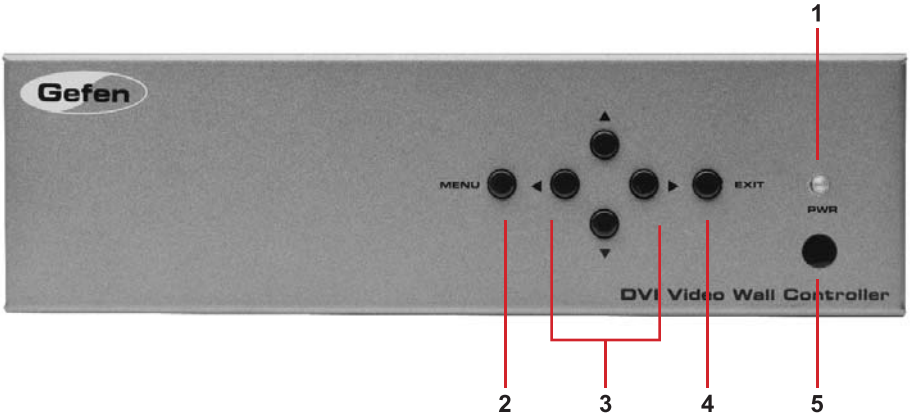
Features

- Split and scale a single DVI-D source to up to four DVI displays at once
- Easy-to-navigate OSD menu system
- Adjustable border control feature
- Input resolutions up to 1920x1200
- Output resolutions up to 1920x1200 or 1080p Full HD
- Fanless design for quiet operation
- Pair of rack ears included
- IR remote control included
- Field upgradable via RS-232
- Locking external power supply connector eliminates power interruptions if power cable is snagged or pulled

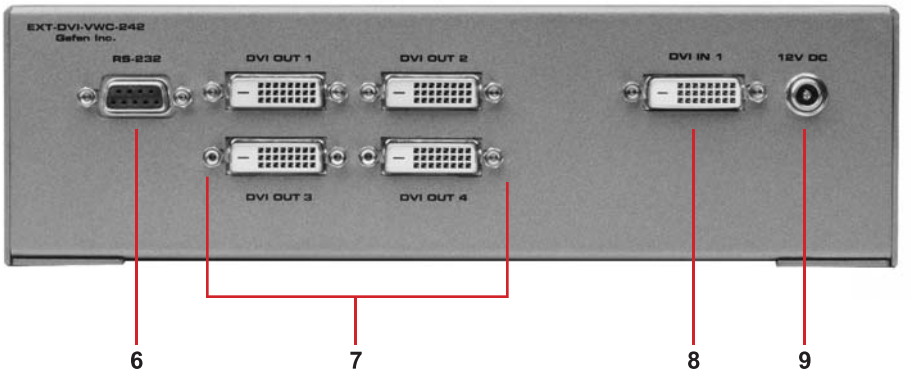
Package Includes

(1) DVI Video Wall Controller (EXT-DVI-VWC-242)
(1) 6 ft. DVI Cable (M - M) (CAB-DVI-06MM)
(1) IR Remote Control (EXT-RMT-VWC-IR)
(1) 6 ft. DB-9 Serial Cable (M - F)
(1) 12V DC External Power Supply
(1) User Manual (MA-DVI-VWC-242)

Front Panel



Back Panel



PANEL DESCRIPTIONS

1 ***Power LED Indicator***
This LED will be active when the DVI Video Wall Controller is receiving power. This is a dual colored LED. This LED will be **GREEN** when a valid/active input signal is detected. This LED will be **ORANGE** when there is no active or valid input signal detected.

2 ***Menu Button***
This button will engage the on-screen menu. This button is also used as the **OK** button to confirm selections and changes when using the on-screen menu.

3 ***Navigation Buttons***
These buttons (◄▲►▼) are used to navigate the on-screen menu.

4 ***Exit Button***
This button is used to navigate back to the previous screen when using the on-screen menu. When on the top-most level, the on-screen menu will exit.

5 ***IR (Infrared) Receiver***
This receiver will receive commands from the included EXT-RMT-VWC-IR remote control. Line-of-sight must be preserved for proper operation to occur.

6 ***RS-232 Serial Communication Port***
This port is used to perform firmware updates.

7 ***DVI Output Ports 1-4 (Digital Only)***
These outputs will each support a single DVI compliant display device. The output ports support digital DVI only (DVI-D).

8 ***DVI Input Port (Digital Only)***
This input will support a single DVI compliant device source device. The input source will be split, scaled, and output via the DVI output ports. The inputs accept digital DVI only (DVI-D).

9 ***12V Locking DC Power Input***
This input will receive power from the included locking 12V DC power supply. When attaching the power cable, screw in the locking connector until it refuses to move any further (do not overly tighten).

CONNECTING AND OPERATING THE DVI VIDEO WALL CONTROLLER

How to Connect the DVI Video Wall Controller

1. Connect the DVI source to the DVI Video Wall Controller's DVI input port using the supplied DVI cable.

NOTE: Please see page 8 for a complete listing of the supported input and output resolutions.

2. Connect up to four DVI compliant display devices to the DVI output ports using user supplied DVI cables.

3. Connect the included 12V DC power supply to the power input on the rear panel of the unit and the plug-end into an open wall power socket.

How to Operate the DVI Video Wall Controller

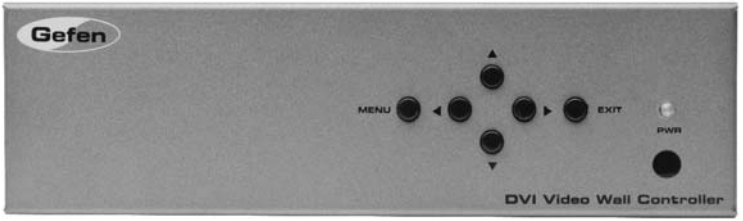
The DVI Wall Controller does not require much setup to begin operation. All operation of the on-screen menu is done using either the front panel buttons or the IR remote control.

For operation using the front panel control buttons please see page 7.

Operation using the included remote control mirrors the front panel buttons. There are corresponding buttons on the remote control that act exactly like the front panel buttons.

The front panel buttons provide quick access to the functions on the DVI Video Wall Controller. Please note that the functions listed in this section can also be accomplished by using the same buttons found on the included IR remote control.

NAVIGATION

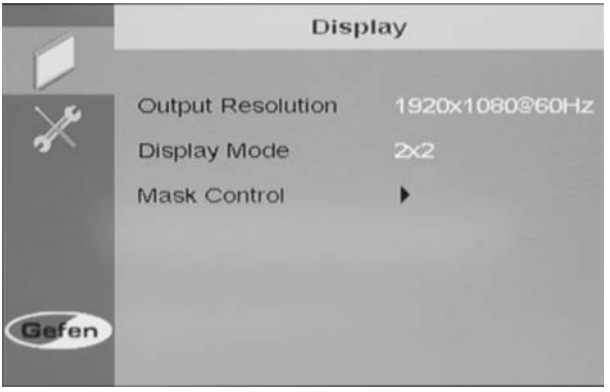


The following buttons are present on the front panel:

- Menu Button: This button will initialize the on-screen display. This on-screen menu will appear on Display 4. This button will also be used to confirm selections and initiate changes. i.e. This button can also be thought of as an **OK** button.
- Navigation Buttons: These buttons function as directional navigation for the on-screen GUI.
- Exit Button: This button will navigate the user to the previous screen. When on the top-most menu, this button will exit the on-screen menu.

OPERATION

To initialize the on-screen menu, press the **MENU** button. The **Main Screen** screen should appear on Display 4. The menu that is displayed is the top-most level. To exit the on-screen menu press the **EXIT** button. The **Main Screen** will appear like the image below.



From the **Main Screen** the following options are available:

- Display - Controls the output resolution, screen mode, and masking control
- System - product and display information. Global contrast and brightness controls can also be found under this option.

Use the ▲ or ▼ buttons to select the desired option. Press the **MENU** button to enter the selected option's menu.

Display

The **Display** menu consists of the following items:

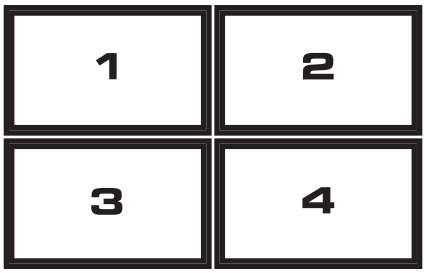
- **Output Resolution** - This will globally set the DVI output resolution for all DVI outputs. Please see the table below for a list of all supported input and output resolutions.

Input Resolutions			
720x350	**832x624**	**1152x900**	**1680x1050**
640x400	**1024x768**	**1280x768**	**1920x1200**
720x400	**1152x648**	**1280x960**	**720x480 i/p**
640x480	**1152x870**	**1280x1024**	**1280x720**
800x600	**1152x870**	**1600x1200**	**1920x1080 i/p**

Output Resolutions			
1360x768	**1400x1050**	**1600x1200**	**1366x768**
1280x1024	**1680x1050**	**1920x1200**	**1920x1080**

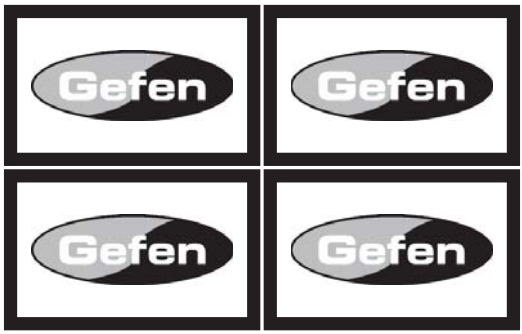
By default, the **Output Resolution** option should already be highlighted. Press the ◄ or ► buttons to change the output resolution. Press the **MENU** button to confirm the change.

- **Display Mode** - This option will set the output configuration of the DVI Video Wall Controller. Please see the illustrations below for information on the modes.

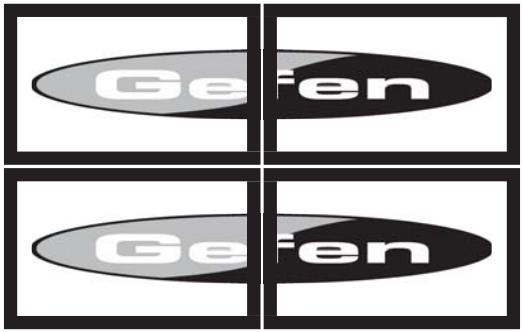


The Illustration on the previous page depicts the display orientation for the following modes.

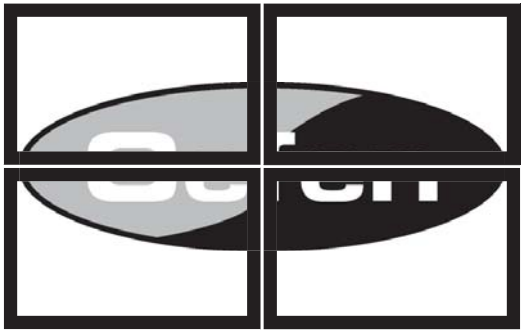
- 1x1: The input signal is duplicated on all outputs



- 1x2: The input signal will span horizontally across displays 1 & 2 and 3 & 4

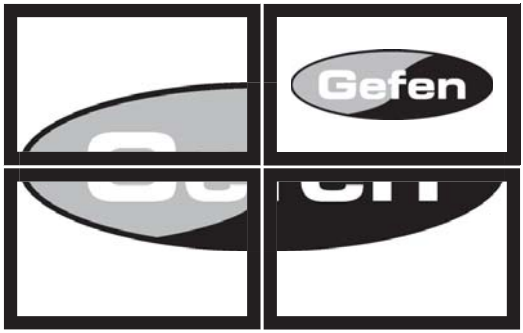


- 2x2: The input signal will be split into 4 quadrants to create a single image over outputs 1, 2, 3 and 4.

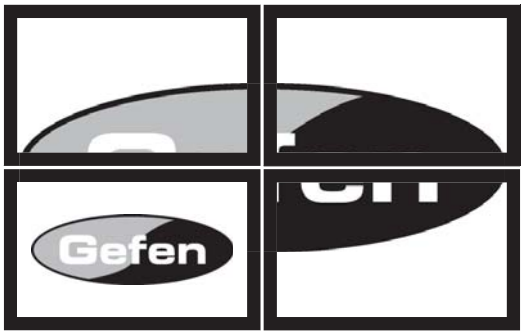


- Mode 1: This mode is similar to the 2x2 mode but the entire input signal will be displayed on output 1.

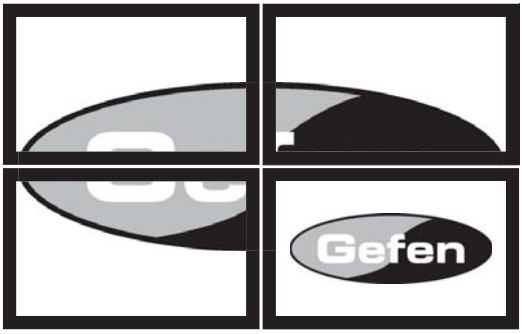
- Mode 2: This mode is similar to the 2x2 mode but the entire input signal will be displayed on output 2.



- Mode 3: This mode is similar to the 2x2 mode but the entire input signal will be displayed on output 3.

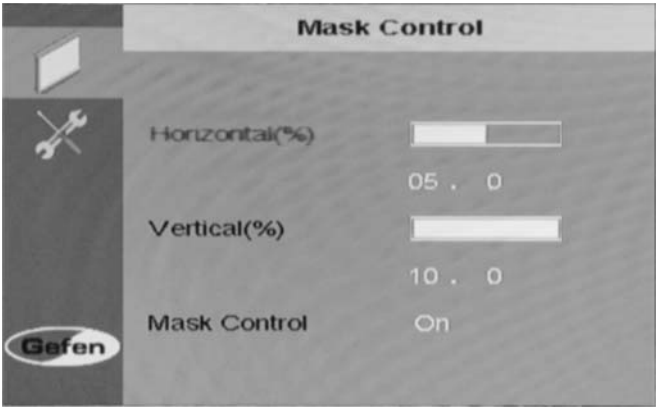


- Mode 4: This mode is similar to the 2x2 mode but the entire input signal will be displayed on output 4.



Use the ▲ or ▼ buttons to highlight the **Display Mode** option. Press the ◄ or ► buttons to change the mode. Press the **MENU** button to confirm the change.

- **Mask Control** - This will set the masking (border compensation) amount that is used to adjust the display to compensate for monitor bezels. Use the ▲ or ▼ buttons to highlight this option. Press the **MENU** button to enter this item's submenu.



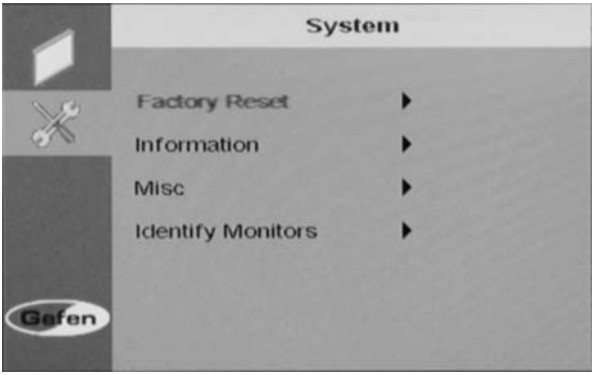
- Horizontal - This will set the horizontal masking control. Use the ▲ or ▼ buttons to highlight the horizontal option and the ◄ or ► buttons to adjust.

- Vertical - This will set the vertical masking control. Use the ▲ or ▼ buttons to highlight the vertical option and the ◄ or ► buttons to adjust.

- Mask Control - This will enable/disable the masking feature. Use the ▲ or ▼ buttons to highlight this option and the ◄ or ► buttons to adjust. Any changes, enabling/disabling or changing masking percentages, must be confirmed but selecting this option and pressing the **Menu** button.

Use the **EXIT** button to return to the **Main Screen**.

System



The **System** menu consists of the following items:

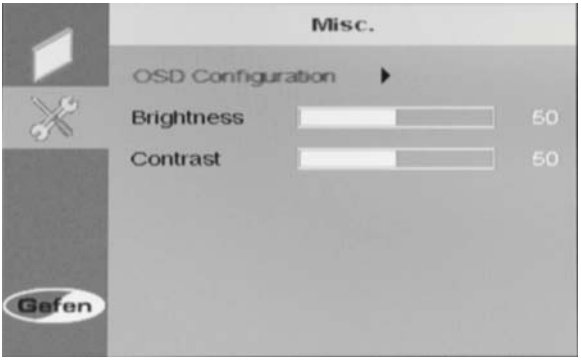
- **Factory Reset** - This will reset the unit to its default settings.

Use the ▲ or ▼ buttons to highlight the factory reset option. Press the **MENU** button to enter perform a factory reset..

- **Information** - This will display information about the current firmware version, output mode (always DVI), and display number.

Use the ▲ or ▼ buttons to highlight the information option. Press the **MENU** button to view information.

- **Misc** - This option will contain brightness, contrast, and OSD controls.



Use the ▲ or ▼ buttons to highlight the misc option. Press the **MENU** button to enter the misc menu.

- OSD Configuration - This will enter the OSD configuration menu. Use the ▲ or ▼ buttons to highlight this option and the **MENU** buttons to enter the OSD configuration menu. Please see page 14 for this menu.

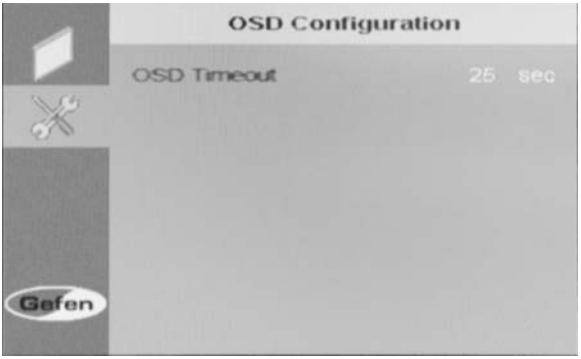
- Brightness - This will globally set the brightness on all DVI outputs. Use the ▲ or ▼ buttons to highlight this option and the ◄ or ► buttons to adjust.

- Contrast - This will globally set the contrast on all DVI outputs. Use the ▲ or ▼ buttons to highlight this option and the ◄ or ► buttons to adjust.

- **Identify Monitors** - This is similar to the **Information** option but will be displayed on all DVI outputs. This is useful for identifying which display is connected to which output.

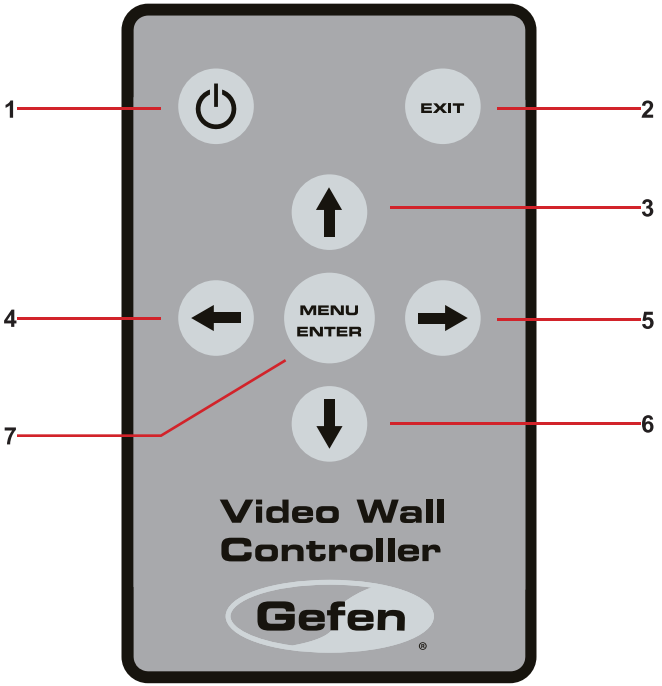
Use the ▲ or ▼ buttons to highlight the identify monitors option. Press the **MENU** button to identify monitors.

- **OSD Configuration** - This will set the OSD timeout.



Use the ◄ and ► buttons to adjust the OSD timeout setting. Press the **MENU** button to confirm the change.

Use the **EXIT** button to return to the **Main Screen.**



1 Power Button
This button toggles the unit between on and standby modes.

2 Exit Button
This button serves the same functions as the **EXIT** button on the front panel. Please see page 5 for information on this button.

3-6 Power Button
This are the navigation buttons that function the same as the navigation buttons on the front panel. Please see page 5 for information on these buttons.

7 Menu Button
This button serves the same functions as the **Menu** button on the front panel. Please see page 5 for information on this button.

NOTE: The remote control comes with a tab inserted into the battery compartment to preserve battery life before usage. Please remove this tab before attempting operation of the remote control.

SPECIFICATIONS

Digital Video Bandwidth .....165 Mhz

Video Inputs ..... (1) DVI-D (Digital Only) 29-pin, female

Video Outputs ..... (4) DVI-D (Digital Only) 29-pin, female

Rack Mountable ..... 1.5U rack size

Power Supply ..... 12V DC

Power Consumption ..... 24 W (max.)

Operating Temperature ..... 0 - 40° C

Dimensions ..... 9.1” W x 2.6” H x 7.3” D

WARRANTY

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.

2. Customers outside the US are responsible for shipping charges to and from Gefen.

3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.

Rev A3

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This product uses UL listed power supplies.